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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,865	09/19/2003	Nobuyuki Nakamura	01590CD/HG	6753
1933	7590	06/13/2005	EXAMINER	
FRISHAUF, HOLTZ, GOODMAN & CHICK, PC 220 5TH AVE FL 16 NEW YORK, NY 10001-7708			YEE, DEBORAH	
			ART UNIT	PAPER NUMBER
			1742	
DATE MAILED: 06/13/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/665,865

Applicant(s)

NOBUYUKI NAKAMURA ET AL

Examiner

Deborah Yee

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) 2 and 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/961,843.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                                     |                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                         | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                                | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9-19-03 3-8-05</u> . | 6) <input type="checkbox"/> Other: ____.                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 403044422.

3. The English abstract of JP'422 discloses a method of producing high carbon steel sheet comprising the steps of hot rolling a steel having a composition analogous to the recited JIS steels, coiling at 420C or more (overlaps claimed range of 520 to 600C), descaling if Be is not present, annealing at 600 to (Ac1+40C ) (overlaps claimed range of 640 to 690C) for about 24 hours as evident by column 2 on page 154 of JP'422 (within claimed time range of 20 hours or more), cold rolling and annealing. Although prior art does not specify temperature range for secondary annealing, one skilled in the art would expect annealing temperature to be similar to primary annealing temperature of 600 to (Ac1+40C) since the same goal of relieving stress and softening steel is desired. Also note that 600 to (Ac1+40C) overlaps with applicant's range of 620 to 680C. In any event, the prior art process teaches the essentially the same process steps as the present invention but with overlapping temperature ranges; and such overlap establishes a prima facie case of obviousness because it would be obvious to

one of ordinary skill in the art to select the claimed temperature ranges from the broader disclosure of the prior art since the prior art has similar properties of high hardness and good formability. See MPEP 2144.05.

### ***Claim Objections***

4. Claim 4 is objected to because of the following informalities: Since claim 4 is not dependent on claim 3, then the formula limitation recited by claim 4 should not be dependent on claim 3. It is recommended to incorporate formula (2) into claim 4. Appropriate correction is required.

### ***Allowable Subject Matter***

5. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. Claim 4 is objected to for minor informalities and will be allowable if corrected.
7. Claims 3 is allowed.
8. The following is a statement of reasons for the indication of allowable subject matter: The art of record does not teach or fairly suggest the method of producing a high carbon steel sheet comprising the steps of subjecting a JIS steel, as claimed, to hot rolling, coiling at 520 to 600C, descaling, annealing at (T1) 640 to 690C for 20 hours or long, cold rolling at a reduction rate of 50% or more, and annealing at (T2) 620 to 689C, such that the T<sub>1</sub> and T<sub>2</sub> satisfy the formula wherein T<sub>2</sub> is between  $1024-0.6 \times T_1$

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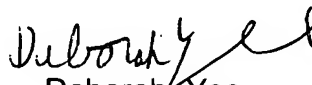
to  $1202-0.80 \times T1$ . Criticality of the equation is established in applicant's test data in Tables 1 to 17 and figures 3 and 4 in order to obtain planar anisotropy of r-value ( $\Delta r$ ) at less than 0.2 to provide dimensional precision when forming.

8. The unapplied references have been cited to further depict the state of the art in making high carbon steel sheet.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on Monday-Friday from 6:00 to 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Deborah Yee  
Primary Examiner  
Art Unit 1742

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